

SALVAGE EXCAVATIONS AT HAMLINS HILL, N42/137, AUCKLAND, NEW ZEALAND

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Abstract. Hamlins Hill is an extensive area of pits and terraces in South Auckland. Salvage excavations were conducted on a portion of the site about to be destroyed by quarrying. The interiors of several pits were partly exposed, revealing post-holes, and drains sometimes covered by stone slabs. Evidence of several surface houses and a cooking area was uncovered in a portion of the site unmarked by surface features.

Hamlins Hill rises to 200 feet (61 m) east of Southdown Railway Station and the Great South Road on the isthmus between the upper reaches of the Manukau Harbour and the Tamaki River. The portage linking the Manukau and Waitemata harbours passed south of Mount Richmond and the McLennan Hills, two volcanic cones nearby.

The area is one of considerable geological complexity. Hamlins Hill is surrounded by basalt derived from Mount Wellington, while immediately to the south, Mount Richmond and the McLennan Hills are surrounded by volcanic tuff and ash. The district is predominantly one of fertile volcanic soils, although Hamlins Hill has a relatively poor clay soil.

The site is well placed for the exploitation of various sea resources. Extensive shellfish beds exist in the nearby Manukau Harbour and Tamaki River; easy canoe landings on the isthmus provide ready access to the more distant sources of sea food. Another attraction of Hamlins Hill itself is the presence of a small, permanent spring of fresh water.

The archaeological importance of Hamlins Hill has long been recognised. It is the only surviving large site in the Auckland area located on a clay, rather than a volcanic hill. Moreover, the gently rolling hillside, and the lack of artificial defences, set the site in a separate category from the steeper and often definitely fortified volcanic cone sites. In 1964, a detailed map of all surface features visible on the site was prepared by Miss M. Nicholls (now Mrs. Hougaard) and members of the Auckland University Archaeological Society. This map is reproduced in Fig. 1, where it can be seen that the site consists of a scatter of pits and terraces dispersed over a considerable area.

In late 1968, it was learned that the smaller knoll to the south of the spring was to be quarried for spoil. No definite estimate could be obtained of the amount of time remaining before all or most of the surface features in this area would be destroyed. With the co-operation of the owner, the Auckland Meat Co., and the quarrying agent, W. Stevenson and Sons, a small rescue excavation was arranged and

carried out during two weeks in February 1969. This was the only time when student labour was available. A small team, approximately six people at any one time, worked on the site.

THE EXCAVATIONS

The site is very dispersed. Time did not permit a full area excavation even of a portion of it, although the relatively simple stratigraphy makes it highly suitable for area excavation. All that could be done was to obtain a sample of the interiors and features of the many pits visible on the surface, and to test one of the extensive flat areas which are interspersed with the pits. With these aims in view, a base line was set out which ran across the central flat and through the two pits, A and B, the former of which is the largest in this part of the site. Quadrants were set out in the two pits, and opposing quadrants excavated, thus providing longitudinal as well as transverse sections through both pits. On either side of the base line, in the flat area above the pits, five squares were set out and excavated. One of these squares bisected a third pit, F.

A trench 10 m x 1 m was set out as a continuation of the longitudinal section through pit A, but at an angle to it. This trench was designed to test three pits, C, D and E. An extension of this trench was subsequently made to expose the end of pit D.

A rectangle 3 m x 4 m was set out on one of the terraces with the aim of investigating the central flat area and one of two pit-like depressions visible on it.

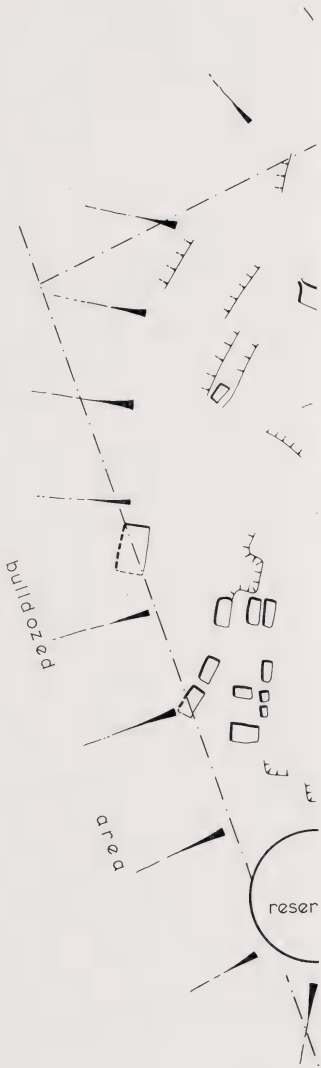
The plan of the area to be destroyed, as mapped in 1964, is reproduced in Fig. 2, with the excavated areas shown. Figure 3 gives a general view of the area involved after initial quarrying had taken place. Three pits on the northern edge of the knoll were affected by this stage of the quarrying.

The stratigraphy of the site was very simple. In the case of the pits, whose fills and features are described below, the principal problem was the removal of a sufficient amount of spoil in the time available to permit an adequate definition of features. The method adopted here was to turf the area to be excavated and remove topsoil, then to sink a test pit in the centre of the pit to establish the floor, and work back from the floor to the walls. Finally, postholes and drains in the floor were excavated.

In the squares, excavation was done by trowelling, and each quadrant was excavated and its contents analysed separately.

THE PITS

In all cases it proved possible to define the edges and floors of the pits and their features. All the pits were rectangular with drains around their floors, and postholes implying some kind of roof structure. The fills of the pits were simple, consisting generally of fairly hard clay fill on the floors and near the walls, overlain



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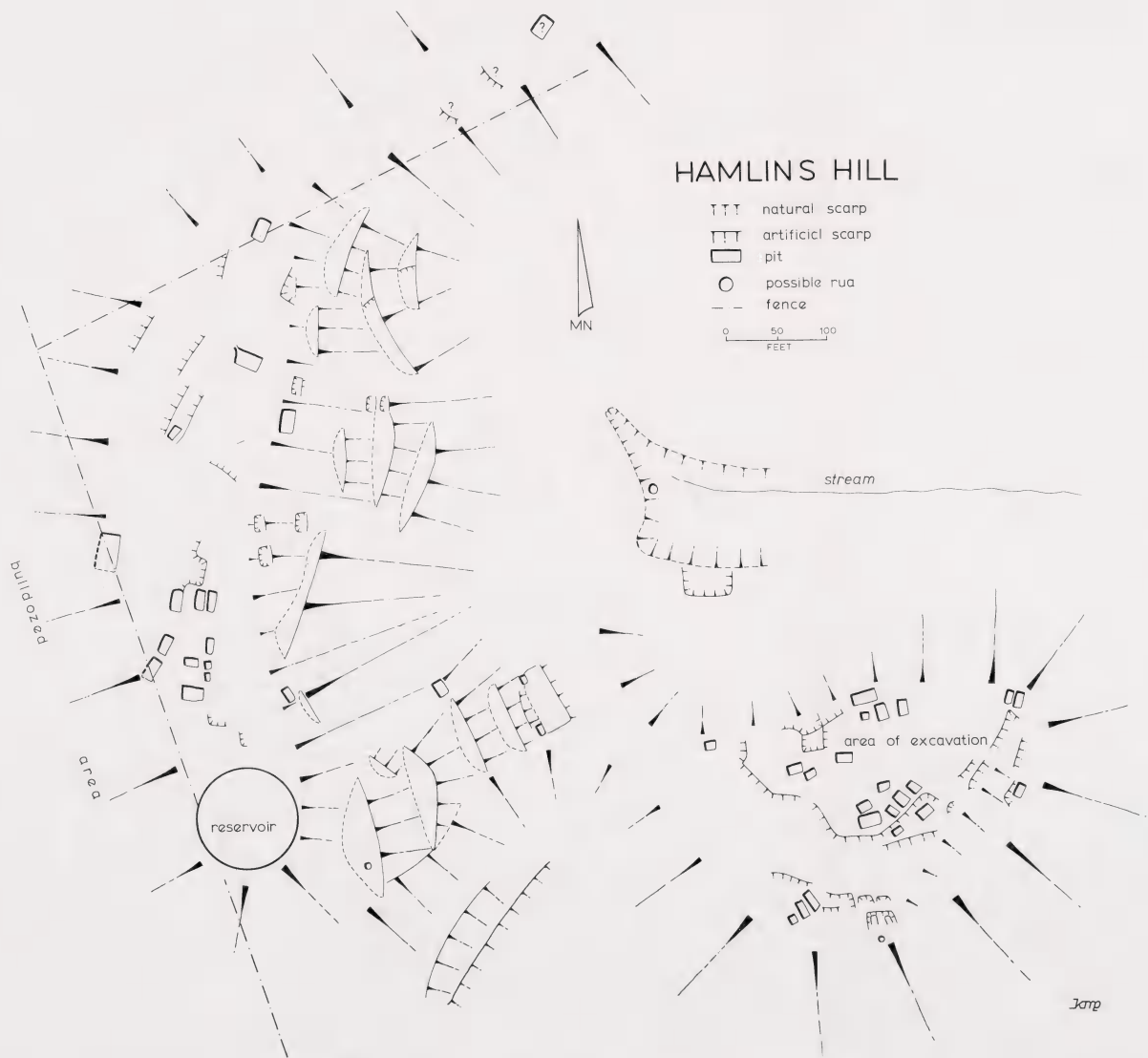


FIG. 1. Map of site N42/137, Hamlins Hill, showing surface features in 1964.

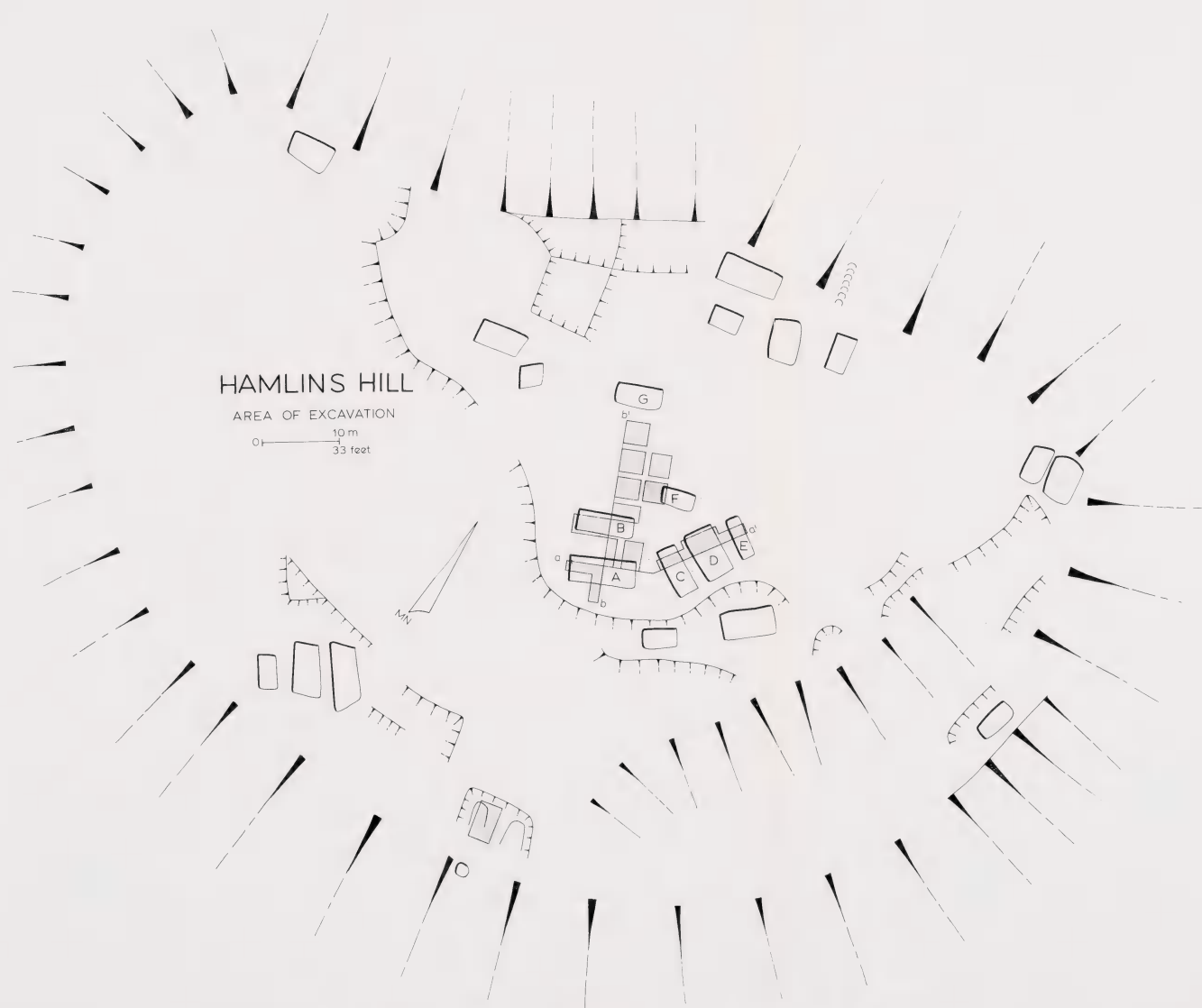


FIG. 2. Map of part of Hamlins Hill to be quarried, showing area excavated.

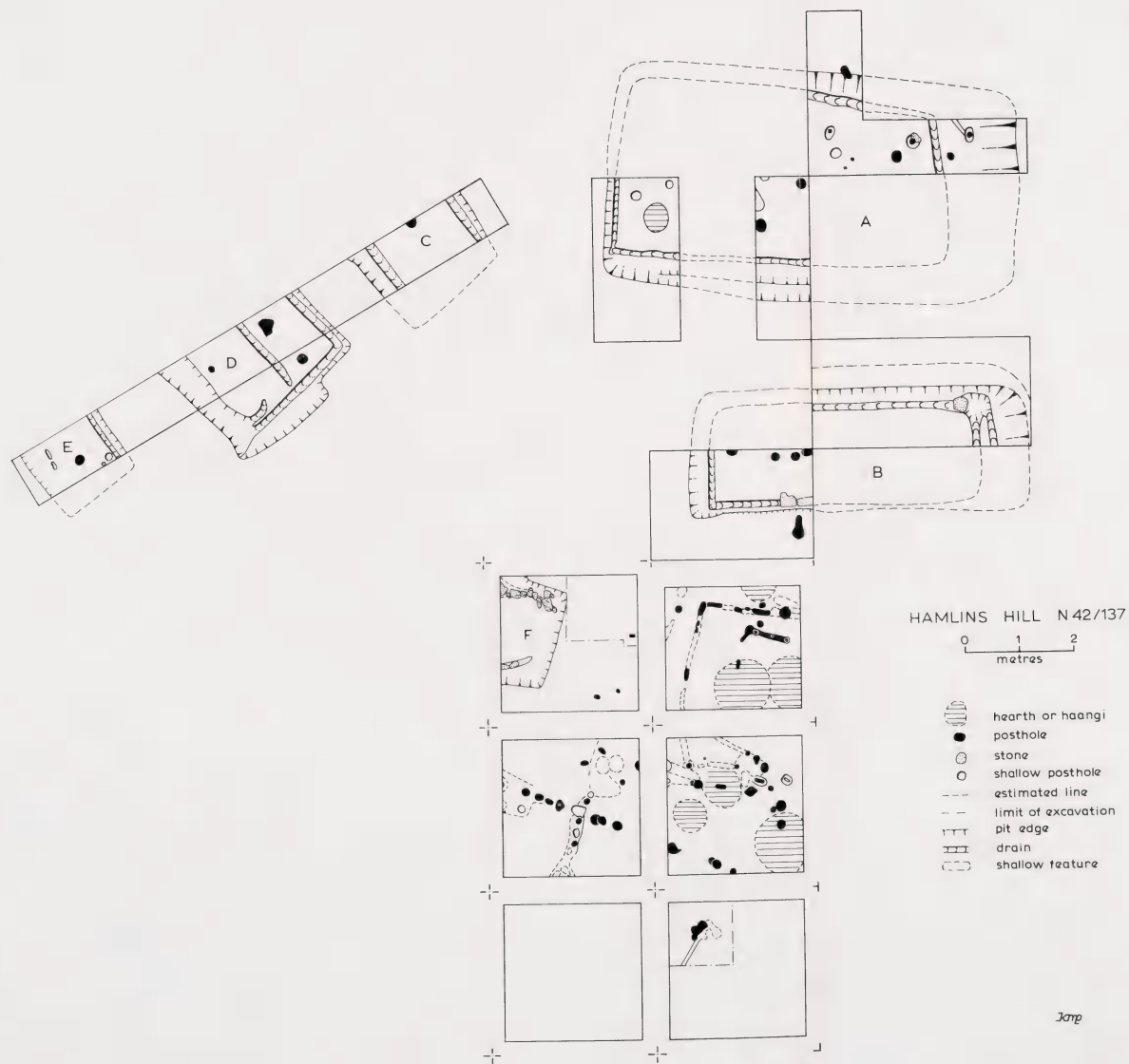


FIG. 4. Plan of features uncovered in excavation, Hamlins Hill.

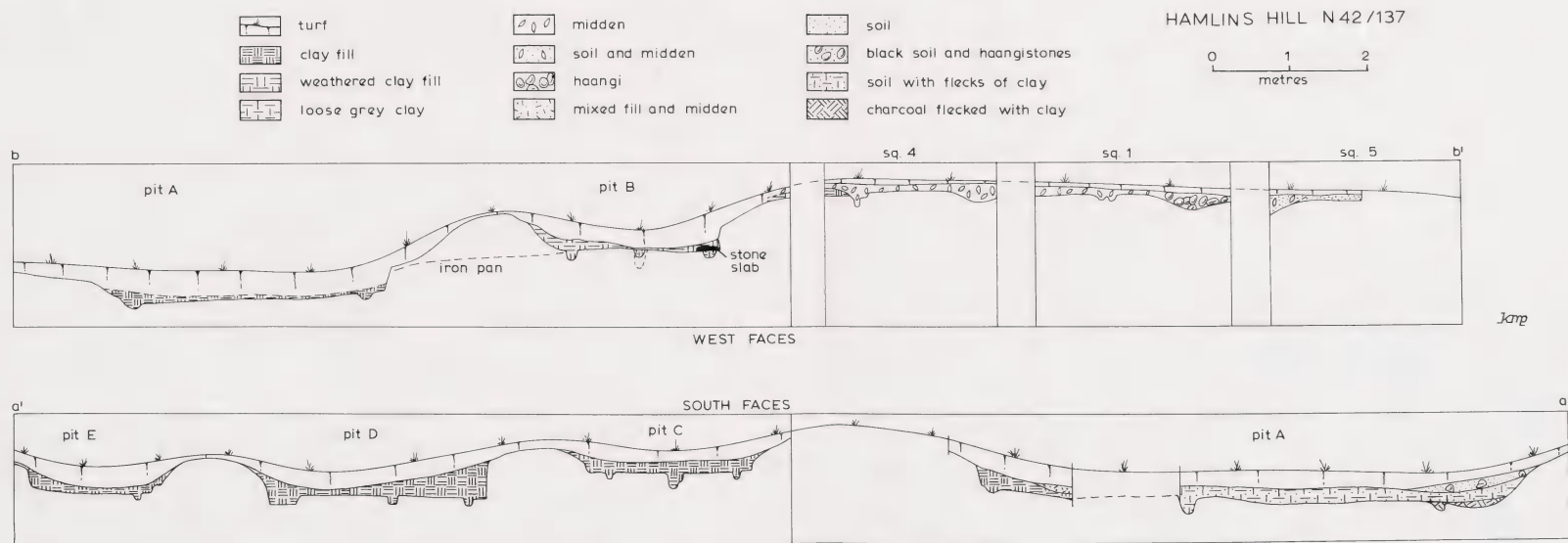


FIG. 5. Principal cross-sections, Hamilins Hill.



FIG. 3. View of part of Hamlins Hill during excavation.

by more humic material. Occasional pieces of obsidian occurred in the pit fills. No layers were continuous through more than one pit except the topsoil. The ground plans of all pits excavated are shown in Fig. 4, while representative cross-sections through them appear in Fig. 5.

PIT A

This pit was so large that it was not possible to excavate more than a third of it. It has a higher northern wall and a lower southern edge, with a rather uneven floor dipping considerably towards the centre and at one end. A shallow drain could be traced, slightly off centre, around the floor in most of the excavated portion. No clear posthole pattern emerged, but there was probably a central row of postholes and two parallel rows at either side inside the drain. A number of smaller holes of uncertain purpose were also located in the pit floor. There was no evidence of wall posts in the excavated portion. The postholes were filled with several rather different materials suggesting more than one phase of construction or use of the pit. A circular depression in the eastern end was filled with a compact mixture of ash, charcoal and clay.

The fill of this pit followed the general pattern, but was complicated by a lens of charcoal-stained clay on the floor at the western end, and a discontinuous layer of *haangi* material, charcoal and burnt stones, between the upper humic layer and the more clay-like fill of the pit. This *haangi* material appears to represent cooking activity considerably later than the construction and use of the pit itself.

PIT B

Fig. 6

A more satisfactory pattern was obtained from the two excavated quadrants of pit B. This pit was a symmetrical rectangular pit with a fairly weathered edge. Again, the northern wall was higher, and was noticeably undercut in places. A pronounced, well-made, square-bottomed drain ran around the floor a few cm from the wall. For a portion of its length this drain was covered with flat slabs of vesicular basalt, deliberately placed over it. Some fragments of bark-like material, similar to those from Alberon Park (Law, this volume) were found in the drain.



FIG. 6. Pit B from the east at completion of the excavation, N42/137.

A single row of central postholes was found. All were filled with a fine dark soil. One posthole appeared at a level slightly above the actual floor, and may indicate re-use of the pit, or merely the longer duration of one of the posts after the others had decayed or been removed. An angled posthole in the northern rim of the pit suggested that a substantial beam had rested in it. If so, the angle of the hole indicates a rather steeply pitched A-shaped roof.

The floor of pit B partly coincided with a natural iron pan in the subsoil. This same iron pan occurred in the northern wall of pit A, where the pit had been dug through it. Differential weathering of the pit wall above and below the iron pan had occurred, the iron pan protecting the lower part of the wall and forming a sort of shelf (Fig. 5).



FIG. 7. Trench through pits C, D and E. Pit E foreground. N42/137.

PIT C

This small shallow pit appeared to follow a similar plan to pit B, with a drain around the edges and a central line of postholes. An insufficient area was exposed to provide any further details.

PIT D

Fig. 7, centre

The only instance of complexity of pit construction occurred in pit D, where two successive intercutting pits were found. The first version had been slightly shorter and broader, and had either a slightly off centre row of postholes or two parallel rows. This pit had been filled, probably deliberately, with a hard clay fill, and then a much narrower, and perhaps longer pit had been dug in the same area. Both pits had a single drain a few cm from the wall. On the east side of the pit these two drains had almost or completely overlapped, with the result that a single drain was revealed during excavation. The posthole pattern of the latter pit is doubtful, but was probably a single central row.

PIT E

Fig. 7, foreground

This was the smallest of the pits. A complete drain was found only on one side, although vestigial traces of a drain were found on the other side. The sides of this pit were low and eroding, but no traces of wall posts were found. Again, the posthole pattern seemed to consist of a single central row.

PIT F

Fig. 8

This pit differed from the others in several respects. The fill contained more fractured stone, and a little dispersed shell, presumably from the midden area nearby. The pit was basically rectangular, but its southern wall turned outwards, suggesting a possible corner buttress. The walls were low and rounded, and the floor sloped downwards towards the centre. The most remarkable feature, however, was the line of stones covering, and in some cases filling, the irregular curving drain. These stones were less regular, and less carefully placed, than those in pit B; the intention appeared to be the same, however. The drain in this pit also was less regular, resembling that from the later phase of pit D.

DISCUSSION

The only pit of which a really adequate sample was exposed was pit B, which appeared to be rectangular, without buttresses, with a drain running into a sump in one corner, and with a central row of postholes. This type is widespread in the Auckland Province. An unusual feature was the partial covering of the drain with stone slabs. This has been reported only from Great Mercury Island, and from Ruarangi near Whangarei (Nicholls, personal communication), although the use of stone for construction purposes has been reported previously in the Auckland district from Mount Wellington (Golson 1960, p. 34).

Although other pits were not excavated to the same extent, largely because of lack of time and labour, some comparisons can be made. Pit C most closely resembles pit B in size and plan. Pits E and F are smaller, but follow the same basic plan,

while pit F also shares the unusual feature of stone-covered drains. It is difficult to be certain of the exact nature of pit D at either stage; the earlier version, not unlike pit B in size, seems to have two rows of postholes, perhaps because of slightly

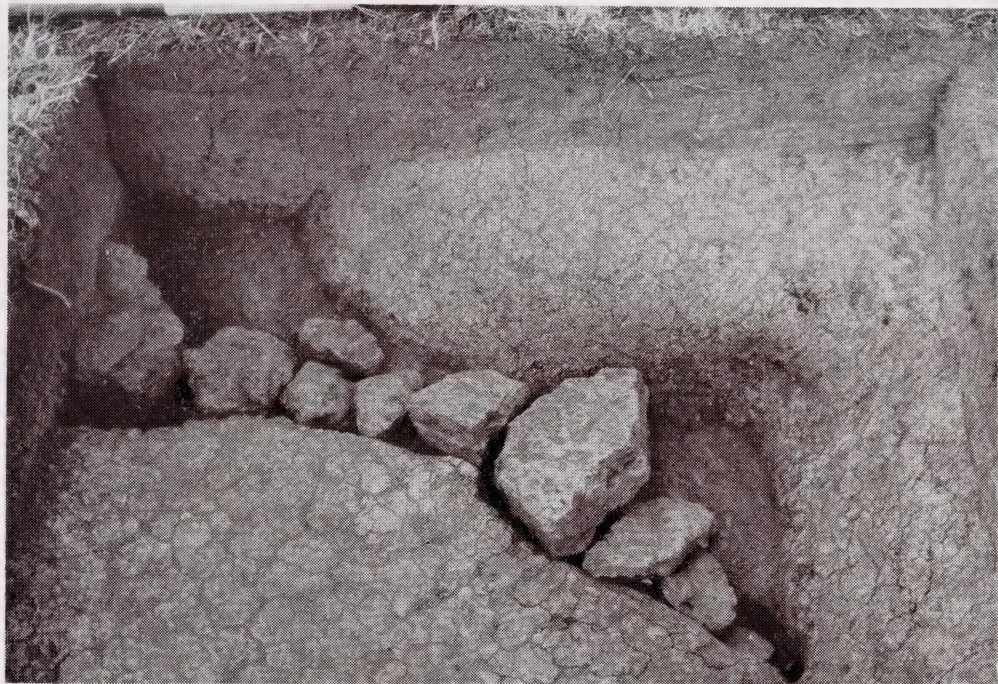


FIG. 8. Stone slabs covering drain in pit F, after excavation. N42/137.

greater width. The later version probably resembled pits E and F. Pit A, the largest pit, seems probably to have had three rows of postholes. The possibility that this pit, too, saw two construction periods is suggested by the large number of postholes, and the difference in size and alignment of pit, and area defined by drains.

A similarity can be seen between the pits here and at other sites such as Taniwha Pa, where drained pits in clay with single or double rows of postholes, depending on pit size, and particularly width, occurred (Green 1963, p. 77). Similar patterns have been found at Bald Hill, South Auckland (McKinlay, personal communication), while less certain parallels also exist with pits on the volcanic cones of Mount Roskill and Mount Wellington (Golson 1960, Shawcross 1962). The absence of buttresses from this site should be noted, but at the same time, the only pit for which absence of buttress is certain is pit B.

While the difficulties of comparing pits at the present time are many, the fact that these pits show stronger similarities with pits in clay at sites such as Taniwha Pa and Bald Hill, and perhaps Harataonga Bay (Spring-Rice 1963), than they do with the nearer clay sites of Alberon Park and Motutapu, is worthy of note.

THE TERRACE

The least satisfactory section of the excavation was that carried out on the terrace to the south of the main excavation. The central part of the terrace proved to be an artificially levelled area which, however, was not particularly flat. One small stake hole was uncovered on this flat area. The stratigraphy consisted of a simple layer of soil overlying the clay subsoil; it contained no cultural material. On the downslope edge of the terrace, a rim of redeposited clay appeared. Only the edge of the pit-like depression lay within the excavated area. It contained a deep soil fill, at the base of which was a thin layer of *haangi* material. This in turn rested on a damp, compacted, clay fill which was extremely difficult to excavate. Owing to the lack of time, and difficulty of excavation, the base of this pit-like feature was not satisfactorily established.

It does appear that the terrace consisted of an artificially flattened area in the centre, and two pits, as was assumed during the mapping of surface features. The central area between the two pits does not appear to have been a house site. Because of their position at the base of a steep scarp, these pits have been subjected to a different kind of infilling process from those near the top of the hill; this made them very much more difficult to excavate. Their function, and the nature of the superstructure if any, remains obscure. Like pit A, this area seems to have experienced a limited re-use for cooking after the pits had been abandoned.

THE SQUARES

Five squares were excavated on the flat area. They were set out as 2.5 m squares with 50 cm baulks, and numbered in order of excavation 1 to 5. Squares 5, 1 and 4 are the three western squares, with 4 nearest to, and 5 furthest from pit B. Squares 2 and 3 are the eastern squares. Square 4 was slightly reduced in size to allow a baulk between it and pit B. Squares 1, 3 and 4 were completely excavated, together with three quadrants of square 3 and half of square 5. The stratigraphy was uniform throughout the area, and consisted of a thin layer of topsoil without cultural material, then a layer of dark sooty soil with shell midden, some bone, and several *haangi*, overlying clay natural in which a number of features had been dug.

The shell midden and the *haangi* pits were concentrated in squares 1 and 4. The midden became thinner and more dispersed in the north of square 1 and in the western halves of squares 2 and 3, giving way horizontally to brown soil in the eastern parts of these squares and in square 5.

MIDDEN

During excavation, attempts were made to save as much of the midden as possible. The material was not sieved however, which means that retention of larger or smaller fragments was essentially arbitrary. In the denser midden areas of squares 1 and 4, excavation proceeded by quadrants, and midden from each quadrant was separately bagged and analysed.

Only a cursory analysis of midden has been undertaken, as it has seemed more important to describe the features uncovered on the site, than the economy which, under the circumstances, was poorly sampled. The midden taken from the excavation

is stored in the Auckland Museum, where it is available for more sophisticated analysis if required. The excavation techniques, however, necessitated by the nature of the salvage operation, may have rendered the samples inadequate for further study.

The shells present in the site have been identified, and a rough indication of their relative proportions gained by counting a minimum number of individuals of each species. The predominant species were bivalves. Individual shells were counted, but time did not permit a division into right and left. The number of animals represented is therefore only approximately half the number of shells counted.

The number of shells from each area of the midden is given in Table 1. From this it can be seen that the density of shell varies considerably, even within squares. The proportions of individual species fluctuate slightly, but the relative importance of the principal species remains the same. In all areas *Chione stutchburyi* is the most important species, followed by *Amphidesma australe* and *A. subtriangulatum*. In both the former species a considerable size range was present, from larger than modern shells to numbers of very small specimens. The shells of *Amphidesma subtriangulatum*, however, were consistently average size or larger. This may reflect more selective gathering or a different composition of the beds. It is also likely that *A. subtriangulatum* would have to be gathered further from the site than the other two species.

Several other shells of mudflat habitat, occurring in the midden, may be the result of indiscriminate gathering rather than actual food species. The shells of *Amphibola crenata* are almost all minute; although this shell was eaten in some localities, it seems unlikely to have been eaten here. Similarly, the various examples of *Cominella* and *Zeacumantus* appear to be incidental to the main composition of the midden. The only other mudflat shells which appear to have been gathered as food are scallops, *Pecten novaezelandiae*, which are present in very small quantities throughout the midden, although in one area a substantial number did appear, and perhaps *Cyclomactra ovata* which, however, is present only in small quantities.

There is a very small but persistent constituent of rocky shore shellfish, including *Lunella smaragda*, *Perna canaliculus*, *Crassostrea glomerata* and *Haustrum haustorium*, the latter represented by only one or two examples. Another rarity, possibly brought in with a kitful of *Amphidesma subtriangulatum*, was a single shell of *Dosinia* sp.

The total quantity of shell midden was not great, and does not appear to reflect the consumption of large amounts of sea foods. It is difficult to determine the presence of midden from surface inspection in this site, however, and it is impossible to decide how extensive the midden areas may be. The shell itself indicates predominant reliance on local tidal mudflats, and fairly indiscriminate gathering of *Chione stutchburyi* and *Amphidesma australe* therefrom; a suggestion that slightly more distant resources were exploited is provided, however, by the limited occurrence of rocky shore species, and the persistent occurrence of *Amphidesma subtriangulatum*.

Many of the shells in the midden are complete or nearly so; the *Amphidesma* shells, however, and to a lesser extent the *Chione*, are badly chipped and broken around their outer edges.

A small quantity of fish bone was recovered from the midden. This may represent half a dozen fish or less. As a rough indication of the distribution of the bone in the midden, numbers of bones recovered from each area are given in Table 2. These are

TABLE 1
 MINIMUM NUMBER OF SHELLS IN MIDDEN, N42/137

SHELL	SQUARE											
	1	2	3	4	E*	S	W	N	2	3	4	E
<i>Chione stutchburyi</i>	387	193	90	42	280	59	340	308	154	877	171	186
<i>Amphidesma australe</i>	83	34	13	4	38	4	42	104	40	485	43	20
<i>A. subtriangulatum</i>	22	11	4	—	9	1	3	48	6	49	8	5
<i>Amphibola crenata</i>	28	14	13	4	16	—	34	19	9	101	12	7
<i>Zacumantus</i> sp.	—	1	—	—	—	—	1	—	—	3	—	—
<i>Comella</i> sp.	2	1	—	—	3	1	5	5	—	9	3	—
<i>Zedloma</i> sp.	1	—	—	—	1	—	—	—	1	1	—	—
<i>Pecten novaezelandiae</i>	—	1	1	1	1	—	1	4	1	24	1	2
<i>Cyclomactra ovata</i>	—	—	3	—	—	—	3	1	1	3	4	4
<i>Maoricryphia</i> sp.	—	—	—	—	—	—	—	1	—	—	—	—
<i>Anomia waltleri</i> ?	4	1	—	—	—	—	—	1	—	—	—	—
<i>Lanella smaragda</i> shell	1	3	—	—	3	—	2	2	2	11	1	—
opercula	4	2	—	—	1	3	8	—	—	7	3	—
<i>Crassostrea glomerata</i>	—	—	1	—	1	1	1	1	—	—	—	1
<i>Perna canaliculus</i>	—	—	—	—	—	—	1	1	—	1	—	—
<i>Haustrum haustrorum</i>	—	—	—	—	—	—	—	1	—	—	—	—
<i>Dosinia</i> sp.	—	—	—	—	—	—	—	—	—	1	—	—

* From fill of features at base of deposit.

nearly all spines. The few jaw bones recovered suggest snapper and barracouta. Very few scales were found, and very few head bones. Little can be said about the fishing habits and resources of the former inhabitants of the site on the basis of so small a sample.

Parts of two rat skeletons were recovered from square 2, and one rat canine from the south-east quadrant of square 4. A very small amount of dog bone was present in the site, and may represent one individual. A few small shaft fragments may be bird bone. No human bones or teeth were recovered.

The amount of midden may represent, at most, portions of one dog, one or two birds, two or three rats, and between three and six fish, together with a fairly small amount of shell. The total area of midden was not exposed, but surface indications and the excavated evidence suggest that it was a localised deposit of which perhaps between one third and one half was excavated. The number of *haangi*, however, appears to be greater than would be needed to cook the food represented in the midden, and it may be assumed that vegetable foods formed a substantial part of the total food cooked on the site.

HAANGI

Some seven separate *haangi* pits were uncovered in the midden area, three in both square 1 and square 4, and probably at least one other in the latter square. These were not all contemporary; particularly in square 4 two or three successive *haangi* could be identified in the northern part of the square. It would seem that the area had been used for cooking on several occasions, but that only one or two *haangi* were in use at a time. Only two *haangi*, one in each square, were found with stones in them as they had last been used. The other *haangi* pits were identified as basin-shaped depressions, often with burnt clay in the base, which were, however, filled with more general midden debris. *Haangi* stones were dispersed through the midden deposit. Weights of stone from various parts of the midden are given in Table 3. Another feature of the midden area was the presence of lenses of clay near the *haangi* depressions, possibly representing material dug out in their construction, and clusters of stones, particularly in association with the southernmost *haangi* in square 4, possibly representing rake out from it.

STRUCTURAL EVIDENCE

Beneath the midden layer, a large number of postholes had been dug into the natural clay. In contrast to the situation in more complex sites, these formed several recognisable structures, although there were also a number which could not be accounted for. The plan of these features appears in Fig. 4. The postholes were filled with a mixture of clay and midden in most cases. Although they were not identified until the midden layer had been removed, it is possible that some were contemporary with, or later than, the midden. In each case where a posthole and *haangi* pit are superimposed, however, the *haangi* clearly seals and postdates the posthole.

Evidence of rectangular surface house structures was uncovered in square 4. These appear to have been constructed of a series of slabs set at varying depths into the ground, interspersed with sections of wall of lighter construction marked only by

a shallow channel a few cm deep. The depths of the slab-shaped postholes vary from 10 cm to 29 cm. Round postholes also occur, usually 30 cm or more in depth, in positions where they may be corner posts, door jambs, or central ridge supports. The walls are most substantial on the south side, and the patterns tend to become confused in square 1, where later postholes associated with the cooking area may also be present.



FIG. 9. Square 4 from the south-east, showing house outlines and *haangi* depressions, N42/137.

Several alternative alignments can be suggested. There are definitely two superimposed houses present and, probably, three. The two more definite structures can be seen in Fig. 9, together with later *haangi* depressions, which have disturbed the original house floors. No stone hearths were found, nor any stones which might have belonged to such hearths.

A further interesting feature of this area was the presence of one and, perhaps, two fairly substantial fences. The more definite of these runs diagonally across squares 1 and 2, and consists of an alignment of ten postholes ranging in depth from 20 to 50 cm. The majority are 30 cm or more in depth (Fig. 10). This line marks the approximate boundary of both the structural evidence and the midden deposit. Trace of an indeterminate structure was found in square 5, but this square contained markedly less cultural evidence than square 1. In square 2, almost at right angles to the first fence line, a shallower line was found. This could represent another house wall, but the unevenness of the surface in this area, compared with square 4, suggests that it may be another fence line.



FIG. 10. Line of postholes apparently representing a fence, square 2, N42/137.

The discovery in this area of a stockade or fence, and several house structures, as well as the cooking area with its superimposed *haangi*, indicate the value of a relatively uncomplicated site for the elucidation of settlement patterns and the discovery of structural evidence. Continued occupation and re-use of this area would have obscured more and more the significance of various postholes. Even with the present evidence, the exact relationship of various features is in doubt.

There is no doubt that at least two successive houses were built, and subsequently replaced by a cooking area, which was used over some extended period of time by a small group, rather than for a single feast. Whether the stockade relates to the house, the cooking area, or both was, however, impossible to determine, as was the relationship of the second possible fence line to other features.

ARTIFACTS

Artifactual material found in the site was extremely limited, and consisted mainly of obsidian flakes.

A fragment of a sandstone grindstone was found in the east quadrant of square 3, near the base of pit F. It measured 8.2 cm wide and 3.7 cm thick, and had broken in half lengthwise so that the existing fragment measured 7.1 cm in length. One surface was smoothed and concave as a result of grinding. Two small stone flakes with no evidence of use were found in the midden in the west quadrant of square 3.

A fragment of a stone adze was found in the midden in the south quadrant of square 4. It is the butt end of a small quadrangular-sectioned adze of a dark fine-grained stone, which had been worked by flaking and grinding, but was not completely ground. It appears to be from a wider adze which had broken in half longitudinally and had been reworked to form a narrower tool. The width is now 2.2 cm, thickness 1.2 cm. The length of the fragment is 2.6 cm.

An unusual flake tool was found in the fill of pit A, at the base of the topsoil. It is a fairly substantial greywacke flake, one side of which has been worked to a point. The point is ground on the sides and tip. The length of the flake, perpendicular to the striking platform, is 3.7 cm, and width 4.5 cm.

Fourteen pieces of obsidian were found in the excavation, including both grey and green varieties. More obsidian was found in or near the pits than in the midden. One small flake of green obsidian was found in the south quadrant of square 4, and one grey flake in each of the east and west quadrants. One large grey flake came from the east quadrant of square 1, and a small chip from the west quadrant.

Two flakes of grey obsidian were recovered from the fill of pit F. One showed tiny chips indicative of use on the edge. A grey flake with use marks was recovered from the fill of pit B at the base of the topsoil, while a flake of green obsidian, also with use marks, was found resting on the clay natural near the top of the wall of pit E.

The greatest concentration of obsidian was in the south quadrant of pit A. Two grey flakes, one with a rough face, were found in the upper portion of the fill. A

small green chip was found at the same depth as the greywacke artifact described above, while a small green flake, and a chip of grey obsidian with one rough surface, were found deep in the bottom fill of the pit.

The artifactual material is very restricted in comparison with that recovered from the two Motutapu settlements, N38/37 and N38/30 (Davidson, Leahy, this volume). It indicates merely that a few tools were present on the site, although little or no tool-working seems to have taken place. The inhabitants seem to have taken almost all tools and other items with them when they departed, and perhaps did not occupy the site long enough for many items to be lost or broken on it.

DISCUSSION

The problems of relating pits and other features in areas not directly linked stratigraphically have been discussed already in preceding papers in this volume. On this site, too, stratigraphic evidence to link the various excavated features in a tight chronological sequence is lacking. The pits A - E, which appear to have filled largely by natural processes, and which for the most part lack cultural material in their fills, must be late features on the site. If pit B, for instance, was earlier than the midden built up in square 4, some midden material would surely occur in the fill of the pit. On grounds of alignment, pits A and B are probably contemporary or nearly so; similarly, pits C - E seem to form a planned group. Whether or not all five are part of a single contemporaneous unit cannot be determined on the evidence available. Pit F, on the other hand, appears to be earlier than the midden build up, which forms a substantial part of its fill.

The earliest activity on the site appears to be the construction of several houses in the vicinity of squares 4 and 1, possibly associated with pit F, and perhaps also pits C, D and E or, at least, the earlier use of pit D. While this association of surface house and subsurface pit is not proven stratigraphically, it is at least probable.

The houses and pit F gave way, at a later period, to the intensive use of the flat as a cooking place, which is probably contemporary with the construction and use of pit B, for the midden does not appear to have been cut through or truncated by the construction of the pit.

It has always been assumed that Hamlins Hill is an "undefended" site or sites, although the possibility exists that there was a fortified point where the reservoir is now located. The line of postholes found in squares 1 and 2 suggests that the excavated area was surrounded by a palisade substantial enough to qualify for that name. This could have been intended as a wind break, or to keep dogs out, or to separate one domestic group from another if several portions of the hill were occupied contemporaneously. At the same time, there is the possibility that it was a minor defensive device.

There are three separate components involved in occupation of this area. Although no more than two at a time can be shown to be contemporary, it is likely that, at any one time, all three were present. The three components are the subsurface

storage pit, the surface house, and the cooking area. These three are the elements postulated for the domestic and communal units of Maori settlement by Groube (1965). Within the excavated area, it appears that all three were present, and that during several successive occupations of the same place the internal arrangement of these elements altered slightly.

The excavated sample is too small for confident extrapolation to other unexcavated portions of the site. The manner in which the cultural deposits peter out in the north of the excavated area suggests, however, that the group of pits investigated forms a separate unit from pit G and other pits in the site. It could be argued that the site represents a series of small hamlets, perhaps occupied successively, rather than contemporaneously, by a small group or several small groups over a period of time.

Despite the limitations imposed by the small area excavated, it is possible to infer that Hamlins Hill was the site of small villages or hamlets, which contained storage and dwelling structures as well as cooking areas. The storage pits are typical of many found throughout the Auckland Province and in some cases, such as Alberon Park (Law, this volume), they are not found associated with any domestic debris. At this site, however, other activities appear to have been associated, suggesting that the site was a village or hamlet, or series of such hamlets, rather than a specialised storage area.

Every new excavation in the Auckland district, particularly on small sites, adds to our knowledge of the nature of settlements. The presence of surface houses is now well attested. The Hamlins Hill houses, while less substantial than that uncovered by Groube at Orakei (Groube, personal communication), are more substantial than that found by Leahy at Motutapu (Leahy, this volume). They are very similar to houses uncovered recently on small pa in the Waikato Basin (Bellwood 1969; Peters, personal communication). It is interesting that both the house structures and the pits on this site seem to have their closest parallels with sites further south, and show only general resemblances to the Motutapu sites. Whether the differences are regional or temporal is uncertain.

The artifactual material was too restricted for any cultural assessment. The structural and economic evidence from the site suggest, however, that it belongs to the Classic Maori Phase.

CONCLUSIONS

Hamlins Hill is ideally suited to extensive area excavation designed to uncover features over a wide area. Excavation on a sufficient scale was not possible during the limited time available for the salvage project. At the time of writing, little further quarrying has taken place and it is hoped that some further work may be carried out before the area is destroyed. Even if this is not possible, the upper part of the site will remain for some time to come and further work should be carried out there to take advantage of the relatively simple stratigraphy and extensive structural evidence contained in the site.

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